

Ömer Yasir Önal

Back-End & Applied AI Engineer

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SUMMARY

Computer Engineering new-grad and back-end & applied-AI engineer — AI Fellow (1,500 of 31,700, ~top 5%) and IEEE SIU 2025 author. I build verifiable, security-minded systems: at AKIS — a live multi-agent AI platform (akisflow.com) — I designed four structural human-approval gates, Ed25519-signed build provenance, and OWASP-LLM safety guardrails, and I shipped UniSum to the App Store on my own Node/MySQL API. Hands-on with Node.js/Python back-ends, PostgreSQL, Docker and CI/CD, and LLM/agent orchestration. Open to junior / entry-level full-time (and freelance) roles.

SKILLS

Security & Trust: Ed25519 signing & build provenance, capability-token approval gates, OAuth 2.1 + Dynamic Client Registration, KVKK/consent compliance, honeypot & rate-limit hardening

Backend & APIs: Node.js, Express, TypeScript, FastAPI (Python), PostgreSQL, MySQL/Sequelize, SQLite, REST, JWT & bcrypt, WebSocket

AI & LLM Engineering: multi-agent orchestration, RAG (pgvector, ChromaDB), Model Context Protocol (MCP), Anthropic/OpenAI/Gemini/OpenRouter APIs, PyTorch (GPT/transformer from scratch), MLX LoRA fine-tuning, transfer learning (TensorFlow/Keras)

DevOps & Infra: Docker, GitHub Actions CI/CD, Vercel, OCI self-hosting, pnpm monorepo, SwiftPM

Frontend & Mobile: React, Next.js, Astro, Tailwind, Three.js / R3F, Vite · Swift 6 / SwiftUI, Flutter / Dart, Capacitor, Firebase, App Store delivery

EXPERIENCE

AI Fellow — Yapay Zeka ve Teknoloji Akademisi Istanbul · Dec 2025 – Present

- Selected among 1,500 of 31,700 applicants for the fellowship.
- Programme run by Google Türkiye, Girişimcilik Vakfı and T3 with the Ministry of Industry & Technology.
- Intensive curriculum in generative AI, ML/DL fundamentals, and end-to-end project development.

Software Engineer Intern — Exedra HRTech Istanbul · Jul 2025 – Aug 2025

- Built web product features and tests in a production HRTech environment.
- Worked in an Agile team with code review.

Instructor / Mentor — T3 Foundation — Deneyap Technology Workshops Istanbul · 2024 – 2025

- Taught and mentored students in the Deneyap technology workshops.

Freelance Software Developer — Freelance Istanbul · May 2024 – Jan 2025

- Delivered end-to-end client sites incl. A2 Reklam — a 341-page trilingual (TR/EN/AR) Astro build.
- Owned scope, timeline and SEO / Google Ads.

Researcher (lead contributor) — TÜBİTAK 2209-A Istanbul · Jun 2023 – Jun 2024

- Applied ML (XGBoost / Random Forest) to sensor data for structural / concrete durability.
- Work produced a paper accepted at IEEE SIU 2025.

PROJECTS

AKIS

akisflow.com

Live, open-source (Apache-2.0) multi-agent AI build platform: an orchestrator dispatching 5 role-separated agents behind 4 structural human-approval gates and an adversarial gate-keeper/reviewer loop; a task is 'done' only after a real boot-smoke test passes. ~1,800 backend + ~700 frontend automated tests green; Ed25519-signed build provenance; OWASP-LLM06 (Excessive Agency) guardrails; Docker image –198MB. Self-hosted at akisflow.com.

TypeScript · Node.js · React 19 · PostgreSQL/pgvector · Docker · Multi-LLM · Ed25519 · MCP

UniSum

apps.apple.com/tr/app/unisum/id6742401580

Shipped to the App Store — native SwiftUI client on a self-built Node/Express/MySQL REST API with JWT/bcrypt auth, hardened with helmet, CORS and rate-limiting.

Swift 6 · SwiftUI · Node.js · Express · MySQL · JWT & bcrypt · REST

newBrain

github.com/OmerYasirOnal/newbrain

A ~42M-parameter causal GPT built from scratch in PyTorch (own BPE tokenizer, RoPE/SwiGLU) with MLX LoRA fine-tuning — the fundamentals beneath the frameworks.

Python · PyTorch · MLX · FastAPI · Three.js · ChromaDB

A2 Reklam

a2reklam.com

Freelance corporate site live in production — 341-page trilingual (TR/EN/AR) Astro build with Schema.org local-SEO and a hardened PHP endpoint (honeypot, rate-limit).

Astro 5 · Tailwind CSS · PHP · Schema.org · GTM/GA4

Studio

github.com/OmerYasirOnal/studio

Multi-agent game-development framework (16 specialist agents coordinating via the filesystem); Three.js + Capacitor, zero paid APIs.

TypeScript · Three.js · React Three Fiber · Capacitor · FastAPI

More on GitHub → github.com/OmerYasirOnal

PUBLICATIONS

Machine learning for structural / concrete durability prediction (XGBoost / Random Forest) — IEEE SIU 2025, 2025

WRITING

Author of 3 Medium articles on AI agents — medium.com/@engomeryasironal

CERTIFICATIONS

- **Foundations of Project Management** — Google (Coursera), Jan 2026
- **Supervised Machine Learning: Regression and Classification** — DeepLearning.AI (Coursera), Nov 2025
- **Exploratory Data Analysis for Machine Learning** — Coursera, Aug 2023

EDUCATION

B.Sc. Computer Engineering (50% English-medium) — Fatih Sultan Mehmet Vakif University — Graduated June 2026

LANGUAGES

Turkish (Native) · English (B2)